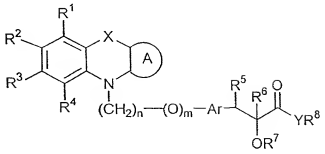
Claims :

1. A compound of formula (I)



(I)

its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts, its pharmaceutically acceptable solvates, wherein R^1, R^2, R^3, and R^4 may be same or different and represent hydrogen, halogen, hydroxy, nitro, cyano, formyl or optionally substituted groups selected from alkyl, cycloalkyl, alkoxy, cycloalkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocyclyl, heteroaryl, heteroaralkyl, heteroaryloxy, heteroaralkoxy, acyl, acyloxy, hydroxyalkyl, amino, acylamino, alkylamino, arylamino, aralkylamino, aminoalkyl, alkoxycarbonyl, aryloxycarbonyl, aralkoxycarbonyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, thioalkyl, alkoxycarbonylamino, aryloxycarbonylamino, aralkoxycarbonylamino, carboxylic acid or its derivatives, or sulfonic acid or its derivatives; the ring A fused to the ring containing X and N represents a 5-6 membered cyclic structure containing carbon atoms, which may optionally contain one or more heteroatoms selected from oxygen, sulfur or nitrogen atoms, which may optionally be substituted; the ring A may be saturated or contain one or more double bonds or may be aromatic; X represents a heteroatom selected from oxygen, sulfur or NR^9 where R^9 is hydrogen, alkyl, aryl, aralkyl, acyl, alkoxycarbonyl, aryloxycarbonyl, aralkoxycarbonyl and the like; Ar represents an optionally substituted divalent single or fused aromatic or heterocyclic group; R^5 represents hydrogen, hydroxy, alkoxy, halogen, lower alkyl, optionally substituted aralkyl group or forms a bond together with the adjacent group R^6; R^6 represents hydrogen, hydroxy, alkoxy, halogen, lower alkyl group, acyl, optionally substituted aralkyl or R^6 forms a bond together with R^5; R^7 represents hydrogen or an optionally substituted group selected from alkyl, cycloalkyl, aryl, aralkyl, alkoxyalkyl, alkoxycarbonyl, aryloxycarbonyl,

alkylaminocarbonyl, arylaminocarbonyl, acyl, heterocyclyl, heteroaryl, or heteroaralkyl groups; R^8 represents hydrogen or an optionally substituted group selected from alkyl, cycloalkyl, aryl, aralkyl, heterocyclyl, heteroaryl, or heteroaralkyl groups; Y represents oxygen or NR^{10}, where R^{10} represents hydrogen, alkyl, aryl, hydroxyalkyl or aralkyl groups or R^8 and R^{10} together form a 5 or 6 membered cyclic structure containing carbon atoms, which may optionally contain one or more heteroatoms selected from oxygen, sulfur or nitrogen; n is an integer ranging from 1-4 and m is an integer 0 or 1.

2. A compound according to claim 1 wherein the subsituents on R^1 - R^4 are selected from halogen, hydroxy, or nitro or optionally substituted groups selected from alkyl, cycloalkyl, alkoxy, cycloalkoxy, aryl, aryloxy, aralkyl, aralkoxyalkyl, heterocyclyl, heteroaryl, heteroaralkyl, acyl, acyloxy, hydroxyalkyl, amino, acylamino, arylamino, aminoalkyl, alkoxycarbonyl, alkylamino, alkoxyalkyl, alkylthio, thioalkyl groups, carboxylic acid or its derivatives, or sulfonic acid or its derivatives .

3. A compound according to claim 1 wherein the cyclic structure A represents phenyl or pyridyl rings.

4. A compound according to claim 1 wherein Ar represents optionally substituted divalent phenylene, naphthylene, pyridyl, quinolinyl, benzofuranyl, benzoxazolyl, benzothiazolyl, indolyl, indolinyl, azaindolyl, azaindolinyl, indenyl, dihydrobenzofuryl, benzopyranyl, dihydrobenzopyranyl, or pyrazolyl groups.

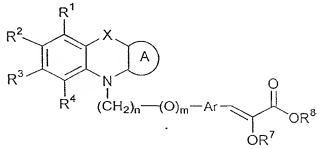
5. A compound according to claim 1 wherein the substituents on the group represented by Ar are selected from linear or branched optionally halogenated (C_1-C_6)alkyl, optionally halogenated (C_1-C_3)alkoxy, halogen, acyl, amino, acylamino, thio, carboxylic acid and sulfonic acids and their derivatives.

6. A compound according to claim 1 wherein when m = 0, Ar represents a divalent benzofuranyl, benzoxazolyl, benzothiazolyl, indolyl, indolinyl, dihydrobenzofuryl, or

dihydrobenzopyranyl groups.

7. A compound according to claim 1 wherein when m = 1, Ar represents divalent phenylene, naphthylene, pyridyl, quinolinyl. benzofuranyl, benzoxazolyl, benzothiazolyl, indolyl, indolinyl, azaindolyl, azaindolinyl, indenyl, dihydrobenzofuryl, benzopyranyl, dihydrobenzopyranyl, or pyrazolyl.

8. A process for the preparation of compound of formula (III)

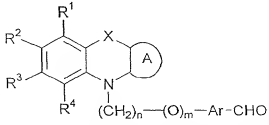


(III)

its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts, its pharmaceutically acceptable solvates, wherein R^1, R^2, R^3, and R^4 may be same or different and represent hydrogen, halogen, hydroxy, nitro, cyano, formyl or optionally substituted groups selected from alkyl, cycloalkyl, alkoxy, cycloalkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocyclyl, heteroaryl, heteroaralkyl, heteroaryloxy, heteroaralkoxy, acyl, acyloxy, hydroxyalkyl, amino, acylamino, alkylamino, arylamino, aralkylamino, aminoalkyl, alkoxycarbonyl, aryloxycarbonyl, aralkoxycarbonyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, thioalkyl, alkoxycarbonylamino, aryloxycarbonylamino, aralkoxycarbonylamino, carboxylic acid or its derivatives, or sulfonic acid or its derivatives; the ring A fused to the ring containing X and N represents a 5-6 membered cyclic structure containing carbon atoms, which may optionally contain one or more heteroatoms selected from oxygen, sulfur or nitrogen atoms, which may optionally be substituted; the ring A may be saturated or contain one or more double bonds or may be aromatic; X represents a heteroatom selected from oxygen, sulfur or NR^9 where R^9 is hydrogen, alkyl, aryl, aralkyl, acyl, alkoxycarbonyl, aryloxycarbonyl, aralkoxycarbonyl and the like; Ar represents an optionally substituted divalent single or fused aromatic or heterocyclic group; R^5 forms a bond together with R^6;

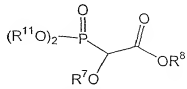
R^7 represents hydrogen or an optionally substituted group selected from alkyl, cycloalkyl, aryl, aralkyl, alkoxyalkyl, alkoxycarbonyl, aryloxycarbonyl, alkylaminocarbonyl, arylaminocarbonyl, acyl, heterocyclyl, heteroaryl, or heteroaralkyl groups; R^8 represents hydrogen or an optionally substituted group selected from alkyl, cycloalkyl, aryl, aralkyl, heterocyclyl, heteroaryl, or heteroaralkyl groups; n is an integer ranging from 1-4 and m is an integer 0 or 1; which comprises :

a) reacting a compound of formula (IIIa)



(IIIa)

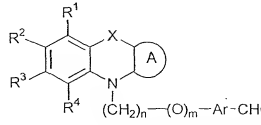
where all symbols are as defined above with a compound of formula (IIIb)



(IIIb)

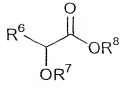
where R^{11} may be a lower alkyl group and R^7 and R^8 are as defined above;

b) reacting a compound of formula (IIIa)



(IIIa)

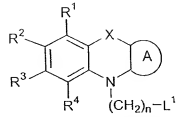
where all symbols are as defined above with a compound of formula (IIIc)



(IIIc)

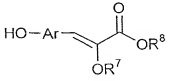
where R^6 represents hydrogen atom and $R^7$and R^8 are as defined above followed by dehydration;

c) reacting a compound of formula (IIIe)



(IIIe)

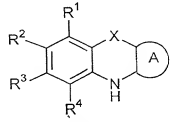
where L^1 represents a leaving group and all other symbols are as defined above with a compound of formula (IIId)



(IIId)

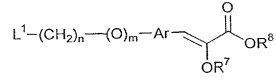
where R^7, R^8 and Ar are as defined above;

d) reacting a compound of formula (IIIg)



(IIIg)

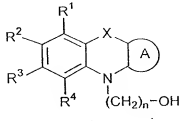
where all symbols are as defined above with a compound of general formula (IIIf)



(IIIf)

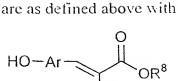
where all symbols are as defined above and L^1 is a leaving group;

e) reacting a compound of formula (IIIh)



(IIIh)

where all symbols are as defined above with a compound of formula (IIId)

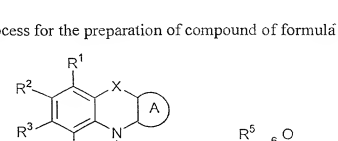


(IIId)

where all symbols are as defined above and if needed;

f) converting the compounds of formula (III) obtained in any of the processes described above into pharmaceutically acceptable salts, or pharmaceutically acceptable solvates.

9. A process for the preparation of compound of formula (I)

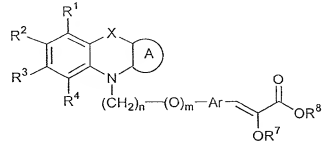


(I)

its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts, its pharmaceutically acceptable solvates, wherein R^1, R^2, R^3, and R^4 are the same or different and represent hydrogen, halogen, hydroxy, nitro, cyano, formyl or optionally substituted groups selected from alkyl, cycloalkyl, alkoxy, cycloalkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocyclyl, heteroaryl, heteroaralkyl, heteroaryloxy, heteroaralkoxy, acyl, acyloxy, hydroxyalkyl, amino, acylamino, alkylamino, arylamino, aralkylamino, aminoalkyl, alkoxycarbonyl, aryloxycarbonyl, aralkoxycarbonyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, thioalkyl, alkoxycarbonylamino, aryloxycarbonylamino, aralkoxycarbonylamino, carboxylic acid or its derivatives, or sulfonic acid or its derivatives; the ring A fused to the ring X and N represents a 5-6 membered cyclic structure containing carbon atoms, which may optionally contain one or more heteroatoms selected from oxygen, sulfur or nitrogen atoms, which may optionally be substituted; the ring A may be saturated or contain one or more double bonds or may be aromatic; X represents a heteroatom selected from oxygen, sulfur or NR^9 where R^9 is hydrogen, alkyl, aryl, aralkyl, acyl, alkoxycarbonyl,

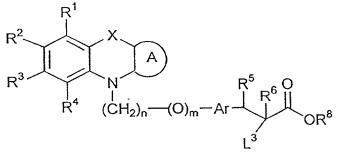
aryloxycarbonyl, aralkoxycarbonyl and the like: Ar represents an optionally substituted divalent single or fused aromatic or heterocyclic group; R^5 represents hydrogen, hydroxy, alkoxy, halogen, lower alkyl, optionally substituted aralkyl group or forms a bond together with the adjacent group R^6; R^6 represents hydrogen, hydroxy, alkoxy, halogen, lower alkyl group, acyl, optionally substituted aralkyl or R^6 forms a bond together with R^5; R^7 represents hydrogen or an optionally substituted group selected from alkyl, cycloalkyl, aryl, aralkyl, alkoxyalkyl, alkoxycarbonyl, aryloxycarbonyl, alkylaminocarbonyl, arylaminocarbonyl, acyl, heterocyclyl, heteroaryl, or heteroaralkyl groups; R^8 represents hydrogen or an optionally substituted group selected from alkyl, cycloalkyl, aryl, aralkyl, heterocyclyl, heteroaryl, or heteroaralkyl groups; Y represents oxygen; n is an integer ranging from 1-4 and m is an integer 0 or 1; which comprises :

a) reducing a compound of formula (III) prepared according to any of the processes claimed in claim 8;



(III)

b) reacting a compound of formula (Ia)



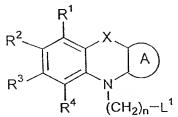
(Ia)

where all symbols are as defined above and L^3 is a leaving group such as halogen atom with an alcohol of formula (Ib)

$$R^7—OH \qquad \textbf{(Ib)}$$

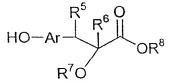
where R^7 is as defined above;

c) reacting a compound of formula (IIIe)



(IIIe)

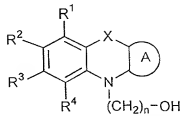
wherein L^1 is a leaving group and all other symbols are as defined above with a compound of formula (Ic)



(Ic)

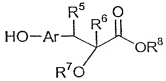
where all symbols are as defined above ;

d) reacting a compound of formula (IIIh)



(IIIh)

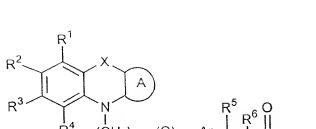
where all symbols are defined above with a compound of formula (Ic)



(Ic)

where all symbols are as defined above;

e) reacting a compound of formula (Id)



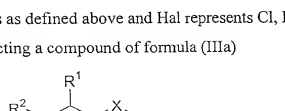
(Id)

where all symbols are as defined above with a compound of formula (Ie)

$$R^7—Hal \qquad \textbf{(Ie)}$$

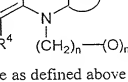
where R^7 is as defined above and Hal represents Cl, Br, or I;

f) reacting a compound of formula (IIIa)



(IIIa)

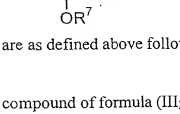
where all symbols are as defined above with a compound of formula (IIIc)



(IIIc)

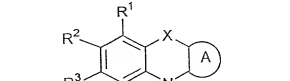
where R^6, R^7, R^8 are as defined above followed by dehydroxylation ;

g) reacting a compound of formula (IIIg)



(IIIg)

where all symbols are as defined above with a compound of formula (If)

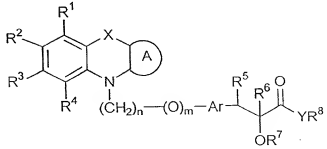


(If)

where L^1 is a leaving group and all other symbols are as defined above and if needed;

h) converting the compounds of formula (I) obtained in any of the processes described above into pharmaceutically acceptable salts, or pharmaceutically acceptable solvates;

10. A process for the preparation of compound of formula (I)



(I)

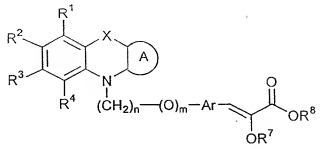
its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts, its pharmaceutically acceptable solvates, wherein R^1, R^2, R^3, and R^4 are the same or different and represent hydrogen, halogen, hydroxy, nitro, cyano, formyl or optionally substituted groups selected from alkyl, cycloalkyl, alkoxy, cycloalkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocyclyl, heteroaryl, heteroaralkyl, heteroaryloxy, heteroaralkoxy, acyl, acyloxy, hydroxyalkyl, amino, acylamino, alkylamino, arylamino, aralkylamino, aminoalkyl, alkoxycarbonyl, aryloxycarbonyl, aralkoxycarbonyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, thioalkyl, alkoxycarbonylamino, aryloxycarbonylamino, aralkoxycarbonylamino, carboxylic acid or its derivatives, or sulfonic acid or its derivatives; the ring A fused to the ring containing X and N represents a 5-6 membered cyclic structure containing carbon atoms, which may optionally contain one or more heteroatoms selected from oxygen, sulfur or nitrogen atoms, which may optionally be substituted; the ring A may be saturated or contain one or more double bonds or may be aromatic; X represents a heteroatom selected from oxygen, sulfur or NR^9 where R^9 is hydrogen, alkyl, aryl, aralkyl, acyl, alkoxycarbonyl, aryloxycarbonyl, aralkoxycarbonyl and the like; Ar represents an optionally substituted divalent single or fused aromatic or heterocyclic group; R^5 represents hydrogen, hydroxy, alkoxy, halogen, lower alkyl, optionally substituted aralkyl group or forms a bond together with the adjacent group R^6; R^6 represents hydrogen, hydroxy, alkoxy, halogen, lower alkyl group, acyl, optionally substituted aralkyl or R^6 forms a bond together with

R^5; R^7 represents hydrogen or an optionally substituted group selected from alkyl, cycloalkyl, aryl, aralkyl, alkoxyalkyl, alkoxycarbonyl, aryloxycarbonyl, alkylaminocarbonyl, arylaminocarbonyl, acyl, heterocyclyl, heteroaryl, or heteroaralkyl groups; R^8 represents hydrogen or an optionally substituted group selected from alkyl, cycloalkyl, aryl, aralkyl, heterocyclyl, heteroaryl, or heteroaralkyl groups; Y represents NR^{10}, where R^{10} represents hydrogen, alkyl, aryl, hydroxyalkyl or aralkyl groups or R^8 and R^{10} together may form a 5 or 6 membered cyclic structure containing carbon atoms, which may optionally contain one or more heteroatoms selected from oxygen, sulfur or nitrogen; n is an integer ranging from 1-4 and m is an integer 0 or 1; which comprises

a) reacting a compound of formula (I) where all the symbols are as defined above and Y represents oxygen with appropriate amines and if needed;

b) converting the compounds of formula (I) obtained above into pharmaceutically acceptable salts, or pharmaceutically acceptable solvates;

11. A compound of formula (III)

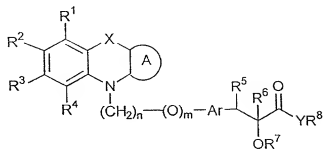


(III)

its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts, its pharmaceutically acceptable solvates, wherein R^1, R^2, R^3, and R^4 are the same or different and represent hydrogen, halogen, hydroxy, nitro, cyano, formyl or optionally substituted groups selected from alkyl, cycloalkyl, alkoxy, cycloalkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocyclyl, heteroaryl, heteroaralkyl, heteroaryloxy, heteroaralkoxy, acyl, acyloxy, hydroxyalkyl, amino, acylamino, alkylamino, arylamino, aralkylamino, aminoalkyl, alkoxycarbonyl, aryloxycarbonyl, aralkoxycarbonyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, thioalkyl, alkoxycarbonylamino, aryloxycarbonylamino, aralkoxycarbonylamino, carboxylic acid or

its derivatives, or sulfonic acid or its derivatives; the ring A fused to the ring containing X and N represents a 5-6 membered cyclic structure containing carbon atoms, which may optionally contain one or more heteroatoms selected from oxygen, sulfur or nitrogen atoms, which may optionally be substituted; the ring A may be saturated or contain one or more double bonds or may be aromatic; X represents a heteroatom selected from oxygen, sulfur or NR^9 where R^9 is hydrogen, alkyl, aryl, aralkyl, acyl, alkoxycarbonyl, aryloxycarbonyl, aralkoxycarbonyl and the like; Ar represents an optionally substituted divalent single or fused aromatic or heterocyclic group; R^5 forms a bond together with R^6; R^7 represents hydrogen or an optionally substituted group selected from alkyl, cycloalkyl, aryl, aralkyl, alkoxyalkyl, alkoxycarbonyl, aryloxycarbonyl, alkylaminocarbonyl, arylaminocarbonyl, acyl, heterocyclyl, heteroaryl, or heteroaralkyl groups; R^8 represents hydrogen or an optionally substituted group selected from alkyl, cycloalkyl, aryl, aralkyl, heterocyclyl, heteroaryl, or heteroaralkyl groups; n is an integer ranging from 1-4 and m is an integer 0 or 1, prepared according to the process of claim 8.

12. A compound of formula (I)

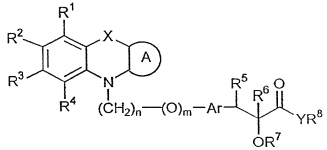


(I)

its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts, its pharmaceutically acceptable solvates, wherein R^1, R^2, R^3, and R^4 are the same or different and represent hydrogen, halogen, hydroxy, nitro, cyano, formyl or optionally substituted groups selected from alkyl, cycloalkyl, alkoxy, cycloalkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocyclyl, heteroaryl, heteroaralkyl, heteroaryloxy, heteroaralkoxy, acyl, acyloxy, hydroxyalkyl, amino, acylamino, arylamino, alkylamino, aralkylamino, aminoalkyl, alkoxycarbonyl, aryloxycarbonyl, aralkoxycarbonyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, thioalkyl, alkoxycarbonylamino, aryloxycarbonylamino, aralkoxycarbonylamino, carboxylic acid or

its derivatives, or sulfonic acid or its derivatives; the ring A fused to the ring containing X and N represents a 5-6 membered cyclic structure containing carbon atoms, which may optionally contain one or more heteroatoms selected from oxygen, sulfur or nitrogen atoms, which may optionally be substituted; the ring A may be saturated or contain one or more double bonds or may be aromatic; X represents a heteroatom selected from oxygen, sulfur or NR^9 where R^9 is hydrogen, alkyl, aryl, aralkyl, acyl, alkoxycarbonyl, aryloxycarbonyl, aralkoxycarbonyl and the like; Ar represents an optionally substituted divalent single or fused aromatic or heterocyclic group; R^5 represents hydrogen, hydroxy, alkoxy, halogen, lower alkyl, optionally substituted aralkyl group or forms a bond together with the adjacent group R^6; R^6 represents hydrogen, hydroxy, alkoxy, halogen, lower alkyl group, acyl, optionally substituted aralkyl or R^6 forms a bond together with R^5; R^7 represents hydrogen or an optionally substituted group selected from alkyl, cycloalkyl, aryl, aralkyl, alkoxyalkyl, alkoxycarbonyl, aryloxycarbonyl, alkylaminocarbonyl, arylaminocarbonyl, acyl, heterocyclyl, heteroaryl, or heteroaralkyl groups; R^8 represents hydrogen or an optionally substituted group selected from alkyl, cycloalkyl, aryl, aralkyl, heterocyclyl, heteroaryl, or heteroaralkyl groups; Y represents oxygen; n is an integer ranging from 1-4 and m is an integer 0 or 1, prepared according to the process of claim 9.

13. A compound of formula (I)



(I)

its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts, its pharmaceutically acceptable solvates, wherein R^1, R^2, R^3, and R^4 are the same or different and represent hydrogen, halogen, hydroxy, nitro, cyano, formyl or optionally substituted groups selected from alkyl, cycloalkyl, alkoxy, cycloalkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocyclyl, heteroaryl, heteroaralkyl, heteroaryloxy, heteroaralkoxy, acyl, acyloxy, hydroxyalkyl, amino, acylamino,

arylamino, alkylamino, aralkylamino, aminoalkyl, alkoxycarbonyl, aryloxycarbonyl, aralkoxycarbonyl, alkoxyalkyl, aryloxyalkyl, aralkoxyalkyl, alkylthio, thioalkyl, alkoxycarbonylamino, aryloxycarbonylamino, aralkoxycarbonylamino, carboxylic acid or its derivatives, or sulfonic acid or its derivatives; the ring A fused to the ring containing X and N represents a 5-6 membered cyclic structure containing carbon atoms, which may optionally contain one or more heteroatoms selected from oxygen, sulfur or nitrogen atoms, which may optionally be substituted; the ring A may be saturated or contain one or more double bonds or may be aromatic; X represents a heteroatom selected from oxygen, sulfur or NR^9 where R^9 is hydrogen, alkyl, aryl, aralkyl, acyl, alkoxycarbonyl, aryloxycarbonyl, aralkoxycarbonyl and the like; Ar represents an optionally substituted divalent single or fused aromatic or heterocyclic group; R^5 represents hydrogen atom, hydroxy, alkoxy, halogen, lower alkyl, optionally substituted aralkyl group or forms a bond together with the adjacent group R^6; R^6 represents hydrogen, hydroxy, alkoxy, halogen, lower alkyl group, acyl, optionally substituted aralkyl or R^6 forms a bond together with R^5; R^7 represents hydrogen or an optionally substituted group selected from alkyl, cycloalkyl, aryl, aralkyl, alkoxyalkyl, alkoxycarbonyl, aryloxycarbonyl, alkylaminocarbonyl, arylaminocarbonyl, acyl, heterocyclyl, heteroaryl, or heteroaralkyl groups; R^8 represents hydrogen or an optionally substituted group selected from alkyl, cycloalkyl, aryl, aralkyl, heterocyclyl, heteroaryl, or heteroaralkyl groups; Y represents NR^{10}, where R^{10} represents hydrogen, alkyl, aryl, hydroxyalkyl or aralkyl groups; or R^8 and R^{10} together may form a 5 or 6 membered cyclic structure containing carbon atoms, which may optionally contain one or more heteroatoms selected from oxygen, sulfur or nitrogen; n is an integer ranging from 1-4 and m is an integer 0 or 1, prepared according to the process of claim 10.

14. A compound according to claim 1 which is selected from :

Ethyl (E/Z)-3-[4-[2-(phenothiazin-10-yl)ethoxy]phenyl]-2-ethoxy propenoate and its salts;

Ethyl (E)-3-[4-[2-(phenothiazin-10-yl)ethoxy]phenyl]-2-ethoxy propenoate and its salts;

Ethyl (Z)-3-[4-[2-(phenothiazin-10-yl)ethoxy]phenyl]-2-ethoxy propenoate and its salts;

Ethyl (E/Z)-3-[4-[2-[phenothiazin-10-yl)methylbenzofuran-5-yl)-2-ethoxypropenoate and its salts;

Ethyl(E)-3-[4-[2-[phenothiazin-10-yl)methylbenzofuran-5-yl)-2-ethoxypropenoate and its salts;

Ethyl(Z)-3-[4-[2-[phenothiazin-10-yl)methylbenzofuran-5-yl)-2-ethoxypropenoate and its salts;

Ethyl (E/Z)-3-[4-[2-(phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropenoate and its salts;

Ethyl (E)-3-[4-[2-(phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropenoate and its salts;

Ethyl (Z)-3-[4-[2-(phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropenoate and its salts;

(±) Methyl 3-[4-[2-(phenothiazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoate and its salts;

(+) Methyl 3-[4-[2-(phenothiazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoate and its salts;

(-) Methyl 3-[4-[2-(phenothiazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoate and its salts;

(±) Methyl 3-[2-(phenothiazin-10-yl)methylbenzofuran-5-yl]-2-ethoxypropanoate and its salts;

(+) Methyl 3-[2-(phenothiazin-10-yl)methylbenzofuran-5-yl]-2-ethoxypropanoate and its salts;

(-) Methyl 3-[2-(phenothiazin-10-yl)methylbenzofuran-5-yl]-2-ethoxypropanoate and its salts;

(±) Methyl 3-[4-[2-(phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoate and its salts;

(+) Methyl 3-[4-[2-(phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoate and its salts;

(-) Methyl 3-[4-[2-(phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoate and its salts;

(±) Ethyl 3-[4-(2-(phenoxazin-10-yl)ethoxy]phenyl-2-ethoxypropanoate and its salts;

(+) Ethyl 3-[4-(2-(phenoxazin-10-yl)ethoxy]phenyl-2-ethoxypropanoate and its salts;

(-) Ethyl 3-[4-(2-(phenoxazin-10-yl)ethoxy]phenyl-2-ethoxypropanoate and its salts;

(±) Ethyl 3-[4-[2-(phenoxazin-10-yl)ethoxy]phenyl]-2-hydroxypropanoate and its salts;

(+) Ethyl 3-[4-[2-(phenoxazin-10-yl)ethoxy]phenyl]-2-hydroxypropanoate and its salts;

(-) Ethyl 3-[4-[2-(phenoxazin-10-yl)ethoxy]phenyl]-2-hydroxypropanoate and its salts;

(±) Ethyl 3-[4-[2-(phenoxazin-10-yl)ethoxy]phenyl]-2-butoxypropanoate and its salts;

(+) Ethyl 3-[4-[2-(phenoxazin-10-yl)ethoxy]phenyl]-2-butoxypropanoate and its salts;

(-) Ethyl 3-[4-[2-(phenoxazin-10-yl)ethoxy]phenyl]-2-butoxypropanoate and its salts;

(±) Ethyl 3-[4-[2-(phenoxazin-10-yl)ethoxy]phenyl]-2-hexyloxypropanoate and its salts:

(+) Ethyl 3-[4-[2-(phenoxazin-10-yl)ethoxy]phenyl]-2-hexyloxypropanoate and its salts;

(-) Ethyl 3-[4-[2-(phenoxazin-10-yl)ethoxy]phenyl]-2-hexyloxypropanoate and its salts;

(±) 3-[4-[2-(Phenothiazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid and its salts:

(+) 3-[4-[2-(Phenothiazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid and its salts;

(-) 3-[4-[2-(Phenothiazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid and its salts;

(±) 3-[4-[2-(Phenothiazin-10-yl)ethoxy]phenyl]-2-ethoxy-2-methylpropanoic acid and its salts;

(+) 3-[4-[2-(Phenothiazin-10-yl)ethoxy]phenyl]-2-ethoxy-2-methylpropanoic acid and its salts;

(-) 3-[4-[2-(Phenothiazin-10-yl)ethoxy]phenyl]-2-ethoxy-2-methylpropanoic acid and its salts;

(±) 3-[4-[2-(Phenothiazin-10-yl)ethoxy]phenyl]-2-phenoxypropanoic acid and its salts;

(+) 3-[4-[2-(Phenothiazin-10-yl)ethoxy]phenyl]-2-phenoxypropanoic acid and its salts;

(-) 3-[4-[2-(Phenothiazin-10-yl)ethoxy]phenyl]-2-phenoxypropanoic acid and its salts;

(±) 3-[4-[2-(Phenothiazin-10-yl)ethoxy]phenyl]-2-phenoxy-2-methylpropanoic acid and its salts;

(+) 3-[4-[2-(Phenothiazin-10-yl)ethoxy]phenyl]-2-phenoxy-2-methylpropanoic acid and its salts;

(-) 3-[4-[2-(Phenothiazin-10-yl)ethoxy]phenyl]-2-phenoxy-2-methylpropanoic acid and its salts;

(±) 3-[2-(Phenothiazin-10-yl)methyl benzofuran-5-yl]-2-ethoxypropanoic acid and its salts;

(+) 3-[2-(Phenothiazin-10-yl)methyl benzofuran-5-yl]-2-ethoxypropanoic acid and its salts;

(-) 3-[2-(Phenothiazin-10-yl)methyl benzofuran-5-yl]-2-ethoxypropanoic acid and its salts;

(±) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid and its salts;

(+) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid and its salts;

(-) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid and its salts;

(±) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxy-2-methylpropanoic acid and its salts;

(+) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxy-2-methylpropanoic acid and its salts;

(-) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxy-2-methylpropanoic acid and its salts;

(±) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-phenoxypropanoic acid and its salts;

(+) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-phenoxypropanoic acid and its salts;

(-) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-phenoxypropanoic acid and its salts;

(±) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-phenoxy-2-methylpropanoic acid and its salts;

(+) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-phenoxy-2-methylpropanoic acid and its salts;

(-) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-phenoxy-2-methylpropanoic acid and its salts;

(±) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-hydroxypropanoic acid and its salts;

(+) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-hydroxypropanoic acid and its salts;

(-) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-hydroxypropanoic acid and its salts;

(±) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-butoxypropanoic acid and its salts;

(+) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-butoxypropanoic acid and its salts;

(-) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-butoxypropanoic acid and its salts;

(±) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-hexyloxypropanoic acid and its salts;

(+) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-hexyloxypropanoic acid and its salts;

(-) 3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-hexyloxypropanoic acid and its salts;

[(2R)-N(1S)]-3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxy-N-(2-hydroxy-1-phenyl ethyl)propanamide and its salts;

[(2S)-N(1S)]-3-[4-[2-(Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxy-N-(2-hydroxy-1-phenyl ethyl)propanamide and its salts;

[(2S)-N(1S)]-3-[4-[2-(Phenothiazin-10-yl)ethoxy]phenyl]-2-ethoxy-N-(2-hydroxy-1-phenyl ethyl)propanamide and its salts; and

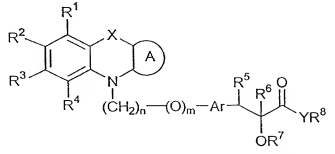
[(2R)-N(1S)]-3-[4-[2-(Phenothiazin-10-yl)ethoxy]phenyl]-2-ethoxy-N-(2-hydroxy-1-phenyl ethyl)propanamide and its salts.

15. A method of preventing or treating hyperlipemia, hypercholesteremia, hyperglycemia, osteoporosis, obesity, glucose intolerance, insulin resistance, or diseases in which insulin resistance is the underlying pathophysiological mechanism comprising administering a compound of formula (I) as defined in claim 1 to a patient in need thereof.

16. A method according to claim 15, wherein the disease is type II diabetes, impaired glucose tolerance, dyslipidaemia, disorders related to Syndrome X such as hypertension, obesity, insulin resistance, atherosclerosis, hyperlipidemia, coronary artery disease and other cardiovascular disorders, certain renal diseases including glomerulonephritis, glomerulosclerosis, nephrotic syndrome, hypertensive nephrosclerosis, psoriasis, and polycystic ovarian syndrome (PCOS), useful as aldose reductase inhibitors, for improving cognitive functions in dementia and treating diabetic complications and osteoporosis.

17. A method according to claim 15 for the treatment and / or prophylaxis of disorders related to Syndrome X, which comprises administering an agonist of PPARα and / or PPARγ of formula (I).

18. A composition which comprises a compound of formula (I)



(I)

as defined in claim 1 and a pharmaceutically acceptable carrier, diluent, excipient or solvate.

19. A composition as claimed in claim 18, in the form of a tablet, capsule, powder, syrup, solution or suspension.

20. A method for preventing or treating hyperlipemia, hypercholesteremia, hyperglycemia, osteoporosis, obesity, glucose intolerance, insulin resistance, or diseases in which insulin resistance is the underlying pathophysiological mechanism comprising administering a compound of formula (I) as defined in claim 1, and a pharmaceutically acceptable carrier, diluent, solvate or excipient to a patient in need thereof.

21. A method according to claim 20, wherein the disease is type II diabetes, impaired glucose tolerance, dyslipidaemia, disorders related to Syndrome X such as hypertension, obesity, insulin resistance, atherosclerosis, hyperlipidemia, coronary artery disease and other cardiovascular disorders, certain renal diseases including glomerulonephritis, glomerulosclerosis, nephrotic syndrome, hypertensive nephrosclerosis, psoriasis, and polycystic ovarian syndrome (PCOS), useful as aldose reductase inhibitors, for improving cognitive functions in dementia and treating diabetic complications and osteoporosis.

22. A method according to claims 20 for the treatment and / or prophylaxis of disorders related to Syndrome X, which comprises administering an agonist of PPARα and / or PPARγ of formula (I).

23. A method for reducing blood plasma glucose, triglycerides, total cholesterol, LDL, VLDL and free fatty acids in the plasma comprising administering a compound of formula (1), as defined in claim 1 and a pharmaceutically acceptable carrier, diluent, solvate or excipient to a patient in need thereof.

24. A composition as claimed in claim 18 for the treatment and / or prophylaxis of type II diabetes, impaired glucose tolerance, dyslipidaemia, disorders related to Syndrome X such as hypertension, obesity, insulin resistance, atherosclerosis, hyperlipidemia, coronary artery disease and other cardiovascular disorders, certain renal diseases

including glomerulonephritis, glomerulosclerosis, nephrotic syndrome, hypertensive nephrosclerosis, psoriasis, and polycystic ovarian syndrome (PCOS), useful as aldose reductase inhibitors, for improving cognitive functions in dementia and treating diabetic complications and osteoporosis.

25. A composition which comprises, a compound according to claim 14 as an active ingredient and a pharmaceutically acceptable carrier, diluent or excipient.

26. A composition as claimed in claim 25, in the form of a tablet, capsule, powder, syrup, solution or suspension.

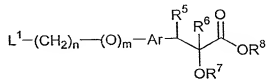
27. A method for preventing or treating hyperlipemia, hypercholesteremia, hyperglycemia, osteoporosis, obesity, glucose intolerance, insulin resistance, or diseases in which insulin resistance is the underlying pathophysiological mechanism comprising administering a compound of as defined in claim 14, and a pharmaceutically acceptable carrier, diluent, solvate or excipient to a patient in need thereof.

28. A method according to claim 27, wherein the disease is type 2 diabetes, impaired glucose tolerance, dyslipidaemia, disorders related to Syndrome X such as hypertension, obesity, insulin resistance, atherosclerosis, hyperlipidemia, coronary artery disease and other cardiovascular disorders, certain renal diseases including glomerulonephritis, glomerulosclerosis, nephrotic syndrome, hypertensive nephrosclerosis, psoriasis, and polycystic ovarian syndrome (PCOS), useful as aldose reductase inhibitors, for improving cognitive functions in dementia and treating diabetic complications and osteoporosis.

29. A method for reducing blood glucose, triglycerides, cholesterol and free fatty acids comprising administering a compound as defined in claim 14 and a pharmaceutically acceptable carrier, diluent or solvates or excipient to a patient in need thereof.

30. A composition containing a compound defined in claim 25 for the treatment and/or prophylaxis of wherein the disease is type II diabetes, impaired glucose tolerance, dyslipidaemia, disorders related to Syndrome X such as hypertension, obesity, insulin resistance, atherosclerosis, hyperlipidemia, coronary artery disease and other cardiovascular disorders, certain renal diseases including glomerulonephritis, glomerulosclerosis, nephrotic syndrome, hypertensive nephrosclerosis, psoriasis, and polycystic ovarian syndrome (PCOS), useful as aldose reductase inhibitors, for improving cognitive functions in dementia and treating diabetic complications and osteoporosis.

31. An intermediate of formula (If)

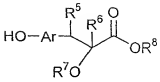


(If)

where Ar represents an optionally substituted divalent single or fused aromatic or heterocyclic group, R^5 represents hydrogen, hydroxy, alkoxy, halogen or lower alkyl, optionally substituted aralkyl group or forms a bond together with the adjacent group R^6; R^6 represents hydrogen, hydroxy, alkoxy, halogen or lower alkyl group, optionally substituted aralkyl or R^6 forms a bond together with R^5; R^7 represents hydrogen or an optionally substituted group selected from alkyl, cycloalkyl, aryl, aralkyl, alkoxyalkyl, alkoxycarbonyl, aryloxycarbonyl, alkylaminocarbonyl, arylaminocarbonyl, acyl, heterocyclyl, or heteroaralkyl groups; R^8 represents hydrogen or an optionally substituted group selected from alkyl, cycloalkyl, aryl, aralkyl, heterocyclyl, or heteroaralkyl groups; n is an integer ranging from 1-4 and m represents an integer 1 and L^1 is a leaving group, useful in the preparation of pharmaceutical compounds of formula (I).

32. A process for the preparation of compound of formula (If) described in claim 31, which comprises :

a) reacting a compound of formula (Ic)



(Ic)

where R^5, R^6, R^7, R^8 and Ar are as defined in claim 31, with a compound of formula (IV)

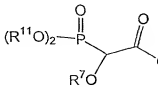
$$L^1-(CH_2)_n-L^2 \qquad \text{(IV)}$$

where L^1 and L^2 may be same or different and represent a leaving group or L^2 may also represent a hydroxy or a protected hydroxy group which may be further converted to a leaving group, n represents an integer 1-4.

b) reacting a compound of formula (V)

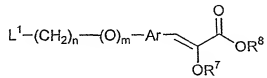
$$L^1-(CH_2)_n-(O)_m-Ar-CHO \qquad \text{(V)}$$

where L^1 represent a leaving group and all other symbols are as defined earlier, with a compound of formula (IIIb)



(IIIb)

where R^{11} may be a lower alkyl group and R^7, R^8 are as defined in claim 31, to yield a compound of formula (IIIf)



(IIIf)

where all symbols are as defined above and L^1 is a leaving group, which is further reduced to yield a compound of formula (If).

33. A compound according to claim 4 wherein the substituents on the group represented by Ar are selected from linear or branched optionally halogenated (C_1-C_6)alkyl, optionally halogenated (C_1-C_3)alkoxy, halogen, acyl, amino, acylamino, thio, carboxylic acid and sulfonic acids and their derivatives.